



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/940,519	08/29/2001	Xiaoming Gu	280/50357	5214

7590 11/22/2004

CROWELL & MORING LLP
P.O. Box 14300
Washington, DC 20044-4300

EXAMINER

LORENCE, RICHARD M

ART UNIT PAPER NUMBER

3681

DATE MAILED: 11/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/940,519

Applicant(s)

GU, XIAOMING

S

Examiner

Richard M. Lorence

Art Unit

3681

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 August 2001 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

This action is in response to applicant's reply filed on October 4, 2004.

Response to Amendment

The declaration filed on October 4, 2004 under 37 CFR 1.131 has been considered but is ineffective to overcome the Savoyard '095 reference.

The evidence submitted is sufficient to establish conception prior to the August 7, 2000 effective date of the Savoyard '095 reference.

However, the evidence submitted is insufficient to establish diligence from a date prior to the date of reduction to practice of the Savoyard '095 reference to either a constructive reduction to practice or an actual reduction to practice. The declaration filed on October 4, 2004 merely alleges diligence without providing evidence of facts establishing diligence. Note MPEP § 715.07 (a) which states:

715.07(a) Diligence

Where conception occurs prior to the date of the reference, but reduction to practice is afterward, it is not enough merely to allege that applicant or patent owner had been diligent. *Ex parte Hunter*, 1889 C.D. 218, 49 O.G. 733 (Comm'r Pat. 1889). Rather, applicant must show evidence of facts establishing diligence.

See also MPEP § 2138.06 for a discussion of reasonable diligence.

Response to Arguments

Applicant's arguments appearing on page 4 of the reply filed October 4, 2004, with respect to the rejection under 35 USC § 112, second paragraph have been fully considered. The rejection of claims 3-7 under 35 USC § 112, second paragraph has been withdrawn, since the meaning of the phrase "completely separate from each other and can freely move independently of each other" should be clear from the description given in the paragraph between lines 5 and 14 on page 6.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 3 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Becker '864. Note particularly Figure 6 which shows the multiplate clutch including the friction plates 14, separator plates 15 and thin members 55.

Claim 7 is rejected under 35 U.S.C. 102(b) as being anticipated by Dover et al. '675. Note particularly Figures 4-16 which shows the separator plates 34(a-h) disclosed for cooperation with friction plates in a wet multiplate clutch as described at column 5, lines 18-25.

Claims 3 and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Savoyard et al. '095. Savoyard discloses a wet multiplate clutch comprising plural friction plates (2) and plural separator plates Fig. 9 (66, 64), wherein the separator plates are groove free (the separator plates 66, 64 are groove free), wherein between each two friction plates adjacent to each other, at least two of the plural separator plates are disposed (shown in Fig. 2), and the separator plates are completely separate from each other and can freely move independently of each other (the separator plates taught by Savoyard are separate and can freely move independent of each other as evidenced by the space shaper, 68, shown in Fig. 9. The space shaper, 68, permits relative movement between the two separate plates 66,64 and corresponds to the "thin member" recited in claim 3).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 3681

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C.103(a) as being unpatentable over Becker '864 in view of Yesnik '654.

Becker discloses all the limitations of claim 4, but lacks any specific disclosure of the separator plates being coated. Yesnik (Abstract) discloses separator plates being coated Fig. 2 (48) to provide an increased coefficient of friction without increasing the wear. It would have been obvious to one of ordinary skill in the art at the time of this invention to modify the separator plate of Becker such that it is coated, in view of Yesnik, for the purpose of providing an increased coefficient of friction without increasing wear.

Claim 4 is rejected under 35 U.S.C.103(a) as being unpatentable over Dover et al. '675 in view of Yesnik '654.

Dover et al. discloses all the limitations of claim 4, but lacks any specific disclosure of the separator plates being coated. Yesnik (Abstract) discloses separator plates being coated Fig. 2 (48) to provide an increased coefficient of friction without increasing the wear. It would have been obvious to one of ordinary skill in the art at the time of this invention to modify the separator plate of Dover et al. such that it is coated, in view of Yesnik, for the purpose of providing an increased coefficient of friction without increasing wear.

Claim 4 is rejected under 35 U.S.C.103(a) as being unpatentable over Savoyard et al. '095 in view of Yesnik '654.

Savoyard discloses all the limitations of claim 4, but lacks any specific disclosure of the separator plates being coated. Yesnik (Abstract) discloses separator plates being coated Fig. 2 (48) to provide an increased coefficient of friction without increasing the wear. It would have been obvious to one of ordinary skill in the art at the time of this invention to modify the separator plate of Savoyard such that it is coated, in view of Yesnik, for the purpose of providing an increased coefficient of friction without increasing wear.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Becker '864 in view of Ueno et al. JP 405231443A.

Becker discloses all the limitations of claim 5, but lacks any specific disclosure of the separator plates being machined. Ueno et al. teaches machining separator plates in a wet multiple disk clutch to improve durability (Constitution). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the separator plates of Becker such that they are machined, in view of Ueno, to improve the durability of the separator plates and the wet multiple disk clutch.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dover et al. '675 in view of Ueno et al. JP 405231443A.

Dover et al. discloses all the limitations of claim 5, but lacks any specific disclosure of the separator plates being machined. Ueno et al. teaches machining separator plates in a wet multiple disk clutch to improve durability (Constitution). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the separator plates of Dover et al. such that they are machined, in view of Ueno, to improve the durability of the separator plates and the wet multiple disk clutch.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Savoyard et al. '944 in view of Ueno et al. JP 405231443A.

Savoyard discloses all the limitations of claim 5, but lacks any specific disclosure of the separator plates being machined. Ueno et al. teaches machining separator plates in a wet multiple disk clutch to improve durability (Constitution). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the separator plates of Savoyard such that they are machined, in view of Ueno, to improve the durability of the separator plates and the wet multiple disk clutch.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Becker '864 in view of Avers '035.

Becker discloses all the limitations of claim 6, but lacks any specific teaching of the thickness of the groove-free separator plates between .5 and 1.52 mm. Avers discloses a clutch with a separator plate (24a, 24b) having a thickness between .01 and .09 inches - equivalent to .254 mm and 2.286 mm (abstract) -. It would have been

obvious to one of ordinary skill in the art at the time of the invention to modify the separator plates of Becker such that the thickness is between .5 and 1.52 mm, in view of Avers, to reduce noise and vibration in the clutch.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dover et al. '675 in view of Avers '035.

Dover et al. discloses all the limitations of claim 6, but lacks any specific teaching of the thickness of the groove-free separator plates between .5 and 1.52 mm. Avers discloses a clutch with a separator plate (24a, 24b) having a thickness between .01 and .09 inches - equivalent to .254 mm and 2.286 mm (abstract) -. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the separator plates of Dover et al. such that the thickness is between .5 and 1.52 mm, in view of Avers, to reduce noise and vibration in the clutch.


Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Savoyard et al. '944 in view of Avers '035.

Savoyard discloses all the limitations of claim 6, but lacks any specific teaching of the thickness of the groove-free separator plates between .5 and 1.52 mm. Avers discloses a clutch with a separator plate (24a, 24b) having a thickness between .01 and .09 inches - equivalent to .254 mm and 2.286 mm (abstract) -. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the separator plates of Savoyard such that the thickness is between .5 and 1.52 mm, in view of Avers, to reduce noise and vibration in the clutch.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard M. Lorence whose telephone number is (703) 308-3062. The examiner can normally be reached on Mondays through Fridays from 9:00AM to 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on (703) 308-0830. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Richard M. Lorence
Primary Examiner
Art Unit 3681

Lorence/rml